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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/827,556	04/19/2004	Chan Hwang	8028-43 (SPX200304-0016US)	3434
22150 7590 04/05/2007 F. CHAU & ASSOCIATES, LLC 130 WOODBURY ROAD WOODBURY, NY 11797			EXAMINER ROSASCO, STEPHEN D	
			ART UNIT	PAPER NUMBER
			1756	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/05/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/827,556

Applicant(s)

HWANG ET AL.

Examiner

Stephen Rosasco

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

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### Detailed Action

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 9 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Pierrat (5,935,734).

Pierrat teaches a method of fabricating a photomask comprising patterning a first layer of photoresist over a layer of opaque material on a photomask substrate, and then etching the layer of opaque material through the openings in the first layer of photoresist to create corresponding openings in the layer of opaque material.

Claims 1, 9 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Kim (7,022,438).

Kim teach a photomask comprising: a transparent substrate; a plurality of line-type opaque patterns formed on the transparent substrate, for defining floodlighting portions for forming patterns; and phase-shifting regions arranged on the transparent substrate between the opaque patterns at predetermined intervals, the phase-shifting regions defining floodlighting portions for contact holes.

And wherein the opaque pattern is an opaque layer.

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pierrat (5,935,734) or Kim (7,022,438) in view of Kawata et al. (6,830,852).

The claimed invention is directed to a photomask comprising a plurality of light-shielding patterns aligned over a transparent substrate in two dimensions, each of the light-shielding patterns having length and width measurements that differ from each other; and at least one through hole penetrating a predetermined region of each of the light-shielding patterns to expose the transparent substrate.

And wherein the plurality of light-shielding patterns, aligned in two dimensions, have equal length and width measurements.

And wherein longitudinal axes of the light-shielding patterns having equal length and width measurements are in parallel.

The teachings of Pierrat or Kim differ from those of the applicant in that the applicant teaches the plurality of light-shielding patterns, aligned in two dimensions, have equal length and width measurements, and are in parallel.

Kawata et al. teach a stencil reticle, comprising a reticle membrane defining apertures having respective opening profiles corresponding to respective pattern elements defined by the reticle, wherein, among the pattern elements defined by the reticle, (a) a linearly extended pattern element having a width less than a predetermined division criterion (L) and a length equal to or greater than L is

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complementarily divided into respective linear pattern-element portions each having a respective length less than L, and (b) a large-area pattern element having both length and width equal to or greater than L is complementarily divided into respective linear pattern-element portions each having a respective width less than L and a respective length equal to or greater than L.

It would have been obvious to one having ordinary skill in the art to take the teachings of Pierrat or Kim and combine them with the teachings of Kawata et al. in order to make the claimed invention because as Kawata et al. teach, in this way the pattern elements are divided so as to reduce size errors that otherwise would be excessive at corners of the pattern elements when projected onto a substrate. i.e., whenever the size error exceeds a predetermined tolerance, then the pattern element is complementarily divided.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Stephen Rosasco whose telephone number is (571) 272-1389. The Examiner can normally be reached Monday-Friday, from 8:00 AM to 4:30 PM. The Examiner's supervisor, Mark Huff, can be reached on (571) 272-1385. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



S. Rosasco  
Primary Examiner  
Art Unit 1756

S. Rosasco  
03/29/07